FORM PTO-1390 (REV 10-2000) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER: 770-X01-004

U.S. APPLICATION NO. (If known, see 37 CFR 1.5): 09/913615

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/00DE/00442	FEBRUARY 16, 2000	02/16/1999 & 10/08/1999

TITLE OF INVENTION: VIDEO COMMUNICATION DEVICE, SYSTEM AND METHOD

APPLICANT(S) FOR DO/EO/US: TOBIAS DORFNER ~~& VOXAR AG~~

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [x] This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. [x] This is an express request to promptly begin national examination procedures (35 U.S.C. 371(f)).
4. [x] The US has been elected by the expiration of 19 months from the priority date (PCT Article 31).
5. [x] A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. [x] is attached hereto (required only if not communicated by the International Bureau).
   b. [ ] has been communicated by the International Bureau.
   c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US).
6. [x] An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
7. [ ] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. [ ] are attached hereto (required only if not communicated by the International Bureau).
   b. [ ] have been communicated by the International Bureau.
   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.
   d. [ ] have not been made and will not be made.
8. [ ] An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C.371(c)(3)).
9. [ ] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. [ ] An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 16 below concern document(s) or information included:

11. [ ] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. [x] A FIRST preliminary amendment.
    [ ] A SECOND or SUBSEQUENT preliminary amendment.
14. [ ] A substitute specification.
15. [ ] A change of power of attorney and/or address letter.
16. [x] Other items or information:
    A. Copy of the Notification of Receipt of Record Copy
    B. Copy of Search Report
    C. Copy of Examination Report
    D. Certificate of Express Mailing
    E. Postcard

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09/913615	PCT/DE00/00442	770-X01-004

17. ☐ The following fees are submitted:	CALCULATIONS PTO USE ONLY
BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :	
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO **$1000.00**	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO **$860.00**	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO **$710.00**	
International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) **$690.00**	
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) **$100.00**	
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 860.00
Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	39 - 20 =	19	X **$18.00**	$ 342.00
Independent claims	5 - 3 =	2	X **$80.00**	$ 160.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ **$270.00**	$
TOTAL OF ABOVE CALCULATIONS			=	$ 1362.00
☒ Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				$ 681.00
SUBTOTAL			=	$ 681.00
Processing fee of **$130.00** for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f)).			+	$
TOTAL NATIONAL FEE			=	$ 681.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property			+	$
TOTAL FEES ENCLOSED			=	$ 681.00
			Amount to be refunded:	$
			charged:	$

a. ☐ A check in the amount of $_____ to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No. 500601 in the amount of $ 681.00 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 500601. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pendin g status.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: TOBIAS DORFNER

Serial No.: National stage filing based on PCT APPLICATION No. PCT/DE99/00442 Group Art Unit:

Filed: August 15, 2001 Examiner:

Title: VIDEO COMMUNICATION DEVICE, SYSTEM AND METHOD

PRELIMINARY AMENDMENT

Assistant Commissioner of Patents

Washington, D.C. 20231

Sir:

Kindly amend the above-entitled application as follows:

IN THE CLAIMS:

Claim 3, line 1 cancel "or 2".

Claim 5, line 1 cancel "or 4".

In each of Claims 6, 7, 12, 13, 14, 15, 16 and 22, line 1 cancel "one of the preceding claims", and insert - - claim 1 - -.

Claim 10, line 1 cancel "one of Claims 7 to 9", and insert - - claim 7 - -.

Claim 11, line 1 cancel "one of Claims 7 to 10", and insert - - claim 7 - -.

Claim 18, line 1 cancel "or 17".

Claim 19, line 1 cancel "one of the claims 16 to 18" and insert - - claim 16 - -.

Claim 20, line 1 cancel "one of the claims 16 to 19" and insert - - claim 16 - -.

Claim 21, line 1 cancel "one of the claims 16 to 20" and insert - - claim 16 - -.

Claim 23, line 2 cancel "one of the claims 1 to 22" and insert - - claim 1 - -.

Claim 25, line 2 cancel "the claims 2 to 22" and insert - - claim 2 - -.

Claim 26, line 1 cancel "or 25".

Claim 28, line 1 cancel "or 27".

Claim 29, line 1 cancel "or 28".

Claim 31, line 1 cancel "or 30".

Claim 33, line 1 cancel "one of the claims 30 to 32" and insert - - claim 30 - -.

Claim 34, line 1 cancel "one of the claims 24 to 33" and insert - - claim 24 - -.

Claim 35, line 1 cancel "one of the claims 24 to 34" and insert - - claim 24 - -.

Claim 37, line 2 cancel "the claims 1 to 22" and insert - - claim 1 - -.

Claim 37, lines 3 and 4 cancel "one of the claims 24 to 26" and insert - - claim 24 - -.

Claim 39, line 1 cancel "one of the claims 1 to 22" and insert - - claim 1 - -,

Claim 39, line 3 cancel "one of the claims 24 to 36" and insert - - claim 24 - -.

REMARKS

The foregoing amendments are to eliminate multiple dependency.

Respectfully submitted,

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Video Communication Device, System and Method

Specification

The invention relates to a video communication device in accordance with the preamble of claim 1, a video communication system having such video communication devices, and a video communication method with which such video communication devices are used.

Video communication devices, video communication systems and video communication methods offering, besides the auditive range, also visible media resp. channels for transmission of sound and image information are known but have not yet found great spreading in the broad population. An essential disadvantage with the prior art is to be precise that by transmission of image information to at least one further communication user, combined therewith, there occurs an often not desired invasion into the user's privacy. In dependence of who starts the communication contact the user and/or his communication partner like(s) to transmit certain visual information or not. Mostly preferred, the communication users would like to transmit an optimum "desired appearance image" adapted to the respective communication partner. This does not only include a suitable background but also appropriate clothes and an advantageous further appearance.

Up to now image edition algorithms have been used e.g., with video conference systems as for instance is disclosed in WO96/09722.

DE-4102895 C1 describes a method and a device for the correction of the eye angle with working place video systems. Here the eye area of a user will be edited to cause the impression that one is looking directly into the camera instead of onto the screen. This edition function works without being noticed by the sender and receiver of the transmission.

Furthermore, it is known that in the field of TV methods exist which change the information in real time or almost in real time before the transmission to the sender unit. This has the advantage that the edited information corresponds or comes close to the creator's desired appearance. These methods include, for example, "Blue Box", "Masking" and "Auto masking".

As well known, the audio visual communication services and systems mentioned above transmit more information than the telephone. Among others, the sending participant's appearance, his body language, facial play and gestures as well as the surrounding which can

be captured by the video camera, belong to this information. Hereby, however, the problem comes up that the transmission of this visual information leads to psychological inhibition thresholds when using the audio visual communication services and systems mentioned above. It is considered to be clear that these psychological inhibition thresholds mostly led to the fact that the video phone, for example, has not still got acceptance on the market up to now.

Therefore, it is an object of the present invention to provide a video communication device, a video communication system and a video communication method which make an unproblematic use both in the private and business field possible without undesired visual impressions to a communication partner being transmitted being transmitted.

According to the invention, this object is achieved with a video communication device according to the claim 1, a video communication system with such video communication devices according to the claim U as well as a video communication method using such video communication devices according to the claim X. By means of this invention psychological inhibition thresholds when using video communication devices and services, are reduced or avoided so that the corresponding video communication technology can come into a widespread use in an advantageous way.

According to the invention thus a video communication device is provided, having user image data input means for the input of current user image data, image data editing means for the generation of edited user image data out of current user image data, and image data output means for the output of user image data at least to one further communication participant. According to the invention there are further provided identification means for identifying at least one communication participant and an editing selection control coupled to the identification means which in dependence on the identification result of the identification means triggers an output of unedited current or edited user image data by means of the image data output means, given the case, preconnecting the image data editing means.

If the video communication device is only accessible for one person as user identification of a caller can be sufficient. If, on the other hand, always the same edited user image data are assigned to each of several users of the video communication device, thus the identification of the corresponding user is sufficient.

By means of the invention it can thus automatically be ensured that by the transmission of unedited image data or of image data of the user especially edited in a presetable way, an

intended visual impression is exactly created for the communication partner. Thereby video communication devices can be used without any drawbacks in practise, especially without transmitting current information of the surrounding, information about the current appearance and even current information about the mood of the user, to the communication partner if this is not desired. So a user does not need to be afraid that the communication partner receives any information about, for example, his flat, his physical appearance or his clothes at the time of the communication. The video communication devices according to the invention make sure that, if required, in dependence on a certain communication partner, such as for example, a superior, friends or relatives, corresponding edited or unedited image data are automatically transmitted to without time intensive manual settings have to be performed or selections have to be made.

Thus the video communication device enable the control of the exchange of self referring information in a simple and reliable manner for the user of corresponding audio visual communication services and systems.

By the invention the user, for example, as sending or receiving participant of audio visual communication signals, is given the chance of influencing the content in such a way that the sent content comes close to the user's idea of his presentation or matches with his idea. Thereby the following disadvantage of the present audio visual communication is overcome: The user of an audio visual message can unhinderedly communicate independently, for example, of his present appearance, for example, in the morning after having got up, in case of illness, disfigurement of his face or despite of an unfavourable appearance due to other reasons.

By using the present invention, for example, with the image telephony, video conferences, conferences at workplaces, Internet conferences, etc., a respective participant at an audio visual communication makes sure for that his appearance and the surrounding also recorded by the camera corresponds to the understanding of his inner self-esteem, at the receiving participant. Thereby, the use of the present invention protects the private sphere and privacy.

Preferably, it is furthermore provided in the video communication device according to the invention that the identification means are designed to identify the user and at least one further contacting or contacted communication participant. Therewith, such a video communication device can be individually used by several users for the communication with corresponding partners and each user appears to each of his communication partners in the individually desired presentation.

EDITED SHEET

Furthermore, in the scope of the invention it is preferred if participant selection data memory means for the saving of participant selection data and participant identification input means for the input of communication participant identifications respectively of the user and/or at least one further contacting or contacted communication participant are assigned to the identification means, and that the identification means are designed to achieve an identification result for the user and/or at least one further contacting or contacted communication participant by comparing saved participant selection data to current communication participant identifications.

The aforementioned embodiment can be further developed in that the participant selection data memory means include user selection data memory means for the saving of user selection data of at least one possible user, and/or partner selection data memory means for the saving of communication partner selection data of at least one possible communication partner. Alternatively or additionally thereto, the participant identification input means for the input of current communication participant identifications, especially of user selection data and/or communication partner selection data, can include manual selection means, electric signal input means, optical signal input means and/or acoustic signal input means wherein preferably, given the case,

- the manual selection means include a key board, menu control keys, menu control levers or menu control pointing instruments and/or touch-sensitive input means for the input of communication participant identifications by the user, and/or
- the electrical signal input means are designed for the reception of electrical signals for the input of communication participant identifications by the user or by a communication participant, and/or
- the optical signal input means are designed for the reception of optical signals for the input of communication participant identifications by the user or by a communication participant, and/or
- the acoustic signal input means are designed for the reception of acoustic signals for the input of communication participant identifications by the user or by a communication participant.

In an other preferred refinement of the invention it is provided that the editing selection control is designed to prevent or to initiate in accordance with a pregiven or presetable editing mode or one out of a plurality of pregiven or presetable editing modi, an editing of the current user image data by means of image data editing means, in dependence on the identification result of the identification means.

Furthermore, in a video communication device according to the present invention it can be provided with advantage that pregiven image data memory means are provided for the saving of pregiven image data, and that the image data editing means are designed for the editing of current user image data by means of and/or on the basis of pregiven image data to create edited user image data.

This embodiment can be further developed in that in such a video communication device it is provided that the pregiven image data memory means include pregiven background image data memory means and/or pregiven people image data memory means, and that the image data editing means are designed for the separation of the current user image data at least in background image data and people image data, and for the replacement of the background image data and/or people image data completely or partly with corresponding pregiven background image data or pregiven people image data, or for the creation of edited background image data and/or people image data on the basis of corresponding pregiven background image data or pregiven people image data from the corresponding memory means. Therewith the pregiven image data memory means or the pregiven people image data memory means can furthermore include body image data memory means and/or head image data memory means, and the image data editing means can be designed for the separation of the people image data into body image data and head image data and the replacement of body image data and/or head image data completely or partly with corresponding pregiven body image data or pregiven head image data, or for the creation of edited body image data and/or head image data on the basis of corresponding pregiven body image data or pregiven head image data from the respective memory means.

Preferably, in the case of the aforementioned embodiment, in the pregiven image data memory means, pregiven background image data memory means and/or pregiven people image data memory means or, given the case, body image data memory means and/or head image data memory means a plurality of pregiven background image data and/or pregiven people image data or, given the case, pregiven body image data and/or pregiven head image data or a plurality of corresponding sets or subsets or components thereof can be saved or are saved which can be assigned to different editing modi of the image data editing means.

According to an other favourable further development of the invention the image data editing means are designed to edit the separated current image date separately from each other and at least essentially simultaneously, and to put them together again afterwards for the generation of edited user image data.

An other favourable further development of the invention is comprised of that by means of image data editing means a cosmetic and/or technical image optimisation of user image data in dependence on an identification result or independent of an identification result and/or, given the case, before and/or after a replacement of background image data and/or people image data or, given the case, body image data and/or head image data can be entirely or partly performed by corresponding pregiven image data from the respective pregiven image data memory means on the basis of editing algorithms.

Furthermore, in a video communication device according to the invention it is of advantage if the user image data input means generate chronologically successively a plurality of current user images each of which are edited individually one after the other and/or according to presetable rules by means of image data editing means.

Preferably the image data editing means in a video communication device according to the invention are designed to successively dynamically perform the separation of background image data and/or people image data as well as, given the case, body image data and head image data and, given the case, their replacement by means of corresponding pregiven image data from the respective pregiven image data memory means for single user images.

Furthermore, it is preferred that the user image data input means include at least one camera, and that the image data output means include at least one interface to a telecommunications network.

In a video communication device as it is provided by the invention, it can be furthermore provided that user sound data input means for the input of current user sound data, sound data editing means for the creation of edited user sound data from the current user sound data, and sound data output means for the output of user sound data to at least one further communication partner are provided.

This embodiment can be further developed in that the editing selection control is designed to generate an output of unedited current or edited user sound data by means of the sound data output means, in dependence on the identification result of the identification means. Alternatively or additionally thereto pregiven sound data memory means for the saving of pregiven sound data can be provided, and the sound data editing means can be designed for editing the current user sound data by means and/or on the basis of pregiven sound data to create edited user sound data.

An other additional or alternative refinement of the embodiment variant of the invention explained herein now, includes that by means of sound data editing means a cosmetic and/or technical sound optimisation of user sound data in dependence on a identification result or independently of a identification result and/or, given the case, before and/or after an editing of the current user sound data by means of the pregiven sound data from the pregiven sound data memory means can be performed on the basis of editing algorithms.

In the field of sound data it can also be provided in a favourable way that editing modi of the sound data editing means pregiven by the user, individually or groupwise are assigned to identification results of the identification means.

Furthermore, it is preferred if the user sound data input means include at least one microphone, and if the sound data output means include at least one interface to a telecommunications network, and/or if the identification means include at least one interface to a telecommunications network.

Preferably, in a video communication device according to the present invention an presentation optimised transmission of video and/or audio data is possible, preferably for the performance of the video communication method described later. Therefore a corresponding video communication device includes:

- video input and output means,
- audio input and output means,
- sending and receiving means,
- an interface to at least one transmission channel
- an input device for the input of control and command signals
- memory means for the saving of user and system programmes as well as of pregiven image data and pregiven sound data, wherein

the above mentioned means, equipment and components are in functional connection with a processor unit which is designed to perform the method steps in interaction with the means and components mentioned.

A further development of the prementioned embodiment of the video communication device according to the invention is that it furthermore has an interface being in connection with the processor unit for the connection with a superior administration unit and/or a superior memory medium, for example, with a "personal computer".

By means of the invention, furthermore, a video communication system is provided with which the object mentioned above is also achieved. Such a video communication system includes at least two video communication devices according to the invention in accordance with one of the claims 1 to 22, which are connected or can be connected via a telecommunications network.

The object based on the invention is also achieved by a video communication method wherein
a communication participant is identified by means of identification means,
current user image data are input into user image data input means,
an editing selection control leads or does not lead current user image data in dependence on the identification result of the identification means, to the image data editing means,
the image data editing means, on receiving the current user image data, generate thereof or therefor edited user image data, and
finally unedited current or, if existing, edited user image data are outputted by means of image data output means.

With regard to the arguments for the achievement of the objective and the advantages, in all it is referred to the presentations in the context with the video communication device according to the invention so as to avoid repetitions.

Favourable further developments of the video communication method according to the invention result from the analogous and adequate implementation of the above mentioned features and combinations of features of the video communication device according to the invention.

Furthermore, the video communication method according to the invention can be further developed in that image data or image and sound data especially in the case of image telephoning are transmitted in an presentation optimised way wherein image data or, given the case, sound data deriving from a video source and, given the case, an audio source, respectively, are changed before their transmission to a communication partner on the basis of pregiven image data or, given the case, pregiven sound data, respectively, corresponding to at least one predetermined or predeterminable criteria, by the following steps:
before starting a communication
a) pregiven image data are created and saved, and
b) parameters referring to the image data are defined, saved and assigned to the pregiven image data saved in step a), and
during a communication

c) user image data, deriving from user image data input means, especially a video source, with regard to one or several chosen or choseable image data parameter(s) are extracted by means of parameters defined and saved in step b),
d) the user image data of step c) based on the chosen image data parameter(s) are edited on the basis of the assigned pregiven image data, and
e) the user image data edited in step d) are transmitted to one or several communication partners.

A further development of this method variant consists in that the steps d) and e) are performed at a central location which is remote from the user, wherein the user image data, the assigned pregiven image data and the image data parameter(s) are transmitted from the user's location to the central location. Alternatively or additionally, it can be provided that the steps a) to e) are performed at a user's location.

Furthermore, the embodiment variant explained herein can be further developed in that an additional step f) is provided in which voice samples of authorised users, saved beforehand are compared to a spoken code phrase of a current user, and in a positive result of the comparison a release of an edited communication for this user is performed. Therewith it is ensured in a favourable easy way that only an authorised user can perform the user specific optimisation and can start a transmission with edited images and/or changed pitch. Therein it can be further provided that in step f) the saved voice sample is additionally assigned to pregiven image data which belong to a user or are chosen as belonging to him, and the user is identified on the basis of the saved voice sample and the relating pregiven image data. Alternatively or additionally, a voice analysis of the spoken code phrase and an image analysis of the user image data deriving from the user image data input means, especially the video source, can be performed in step f). The embodiment mentioned last can still be further developed in that in the image analysis characteristic facial features of a user are compared to relating or chosen pregiven image data.

An other further development of the basic variant of the invention of a video communication method herein explained last includes that before the performance of step c) the user is identified as authorised to use saved pregiven image data for the audio visual communication.

Furthermore, it is preferred in the video communication method according to the invention that the user image data to be processed or to be edited and analysed, the pregiven image data

as well as the edited user image data include motion images, two dimensional and three dimensional image information.

An other preferred embodiment of the video communication method according to the invention includes that the user image data to be transmitted are shown to the user before the transmission. Preferably, this can be further developed in that the display includes an interactive user surface which also displays the choseable and/or chosen pregiven image data as well as the choseable or chosen image data parameters.

The video communication device, the video communication system and the video communication method according to the invention are favourably suitable for the especially image optimised transmission of video and/or audio data in the case of image telephoning, video conferences or via computer networks.

Further preferred and favourable embodiments of the invention result from the respectively depending claims and the combinations thereof as well as the analogous and suitable transfer of the respective features and combinations of features between device, system and method claims.

In the following the invention is explained in examples in more detail on the basis of the embodiment examples shown in the drawings wherein further features and combinations thereof are disclosed. In the drawings:

Figure 1 shows a block diagram of a device according to the invention for sending/receiving audio visual information with user optimised content,

Figure 2 shows a block diagram on details of the functional group „memory" according to the Figure 1,

Figure 3 shows a block diagram of functions when using the device of the figures 1 and 2 without user controlled optimisation,

Figure 4 shows a block diagram of functions using an user controlled optimisation,

Figure 5 shows a function flow diagram of method steps if no user controlled optimisation is performed, and

Figure 6 shows a function flow diagram of method steps if a user controlled optimisation is performed.

The same reference symbols in the individual figures and illustrations of the drawings refer to the same or similar or equally or similarly effecting components. On the basis of the illustrations in the drawing even such features are made clear which do not have a reference symbol independently of the fact if such features are described in the following or not. On the other hand features included in the present description but not visible or illustrated in the drawing are also evident to an ordinary person skilled in the art.

The invention is based on the existence of audio visual communication media. General features of audio visual communication media are microphone and loudspeaker, video camera and monitor, a control unit, a sending processing unit for the processing of audio and video signals, a receiving processing unit for the processing of audio and video signals, and a compression unit for optimum usage of the provided line bandwidth, for example, via analogous or digital telephone networks, package controlled communication via the Internet, internal computer networks, etc.

The present invention expands the audio visual communication media amongst others by a function which is called "optimising image processing" (OIP) in the following. The function OIP according to the invention can be used, for example, in video image phones, video conference systems or systems based on the Internet protocol. For the purpose of simplification the present description mainly refers to the user controlled OIP and will not so much explain the voice optimisation in greater detail.

The OIP according to the invention gives the participant the opportunity of saving 1 to n optimised images of his desired appearance as reference image information or pregiven image data in one or also several memory media. Therein memory media of different physical kind can be also used.

Now reference is made to figure 1 which shows a block diagram of a device which is adapted for the performance of the method according to the invention, i.e., for sending/receiving audio visual information with user controlled optimisation.

According to figure 1 a central processor unit 10 is in functional connection with user image data input means in the form of an image input unit 11, for example, a video camera, with a display device 12, for example, a PC monitor or a liquid crystal display, with an audio

output/input means 13 including image data and sound data output means, with a audio visual communication unit including a sending unit 14, a receiving unit 15 and an interface to a telephone network, radio network, mobile network or data network 16 or generally telecommunications network, with an interface 17 to a superior memory medium or a computer, such as, for example, a personal computer, with an input device 18, for example, a telephone keyboard or a separate keyboard as example for participant identification input means, and with a memory 20 in which at least user specific programs 21 and reference image or pregiven image data 22 and, given the case, audio reference data or pregiven sound data are saved, and which thus represents pregiven image data and pregiven sound data memory means.

The figure 2 shows that the memory 20 can include several also physically different memory media. The optimised or edited reference information, i. e., the reference image information or edited user image data and the reference audio information or edited user sound data are transmitted on the one hand via the image input unit 11 which can be a video camera, a recorder, etc., the audio input unit 13 or from a superior unit via the interface 17 into the memory 20. Thereby it is irrelevant whether the applications and the image material are provided, for example, in a ROM memory, a RAM memory or a mass memory such as, for example, in a hard disk, in flash cards or similar media (figure 2). As mentioned, the memory 20 can also include reference audio information or pregiven sound data that can be used for the user controlled optimisation of his voice. The user controls, for example, by means of the input device 18 the optimising image processing or image data editing so as to optimise the image and/or voice to be sent by him to a communication partner according to his choices. The input device 18 can be, for example, a telephone keyboard, a separately connected keyboard, a computer mouse, a light pen, a graphic tray, etc.

In Figure 2 details of the memory 20 as well as of the user specific information contents 21 saved therein and the reference images or pregiven image data 22 are shown. As shown, the memory 20 which can be used with the invention can have or include a ROM memory, RAM memory, a hard disk, a removable disk, a floppy disk, a flash card and other suitable memory media. The memory 20 can also include a combination of such memory media. In the contents block 21, in which user specific programs and information or data are saved, there is located a block 210 for the user recognition or user identification, a block 211 for the technical image optimisation or editing by means of different algorithms 1, 2, ... N, a block 212 for the cosmetic appearance optimisation or image optimisation, again by means of different image editing algorithms 1, 2, ... N, a block 213 for the background processing, a block 214 for the head processing and a block 215 for the body processing. It has to be mentioned here that that

the individual blocks 211 to 215 included in the user specific block 21 and mentioned above, are not limited to the given listing, and that memory contents for the voice recognition and further contents may exist which were not mentioned herein to avoid repetitions under similar and analogous aspects between the image and the voice optimisation.

The block 22 shown in figure 2 referring to the image material of the pregiven image data, i.e., the reference image information, includes a block 221 with pregiven background image data or reference background images 1, ...N, a block 222 with reference images 1, 2, ... N of the user's head (pregiven head image data), and a block 223 with reference images 1, 2, ... N of the user's body (pregiven body image data). This terminology is based on the fact that the term „body" includes the parts of the body excluding the head.

For a video communication device according to the invention in the form of the audio visual communication device shown in the figures, which is authorised for several participants, the blocks 221 to 223 exist correspondingly several times which can be realised within individual physical memory devices by means of their suitable division possibly according to software or in the form of separate memory means for each user.

In the figure 3 there is shown in the form of a function block diagram a manner of function without optimising image editing on the side of the sender, i. e., without the OIP according to the invention. The OIP mentioned above shown in a function block 40 is deactivated and the video signal of the video signal source goes directly to a coding block 41. This manner of function will be automatically chosen by the video communication device on the basis of an identification result, for example, of the user and communication partner identification, by means of identification means, which will be referred to later, if the user had determined in advance that the concrete communication partner shall get transmitted and therewith be able to see the current user image data.

In contrast thereof the figure 4 shows in the form of a function block diagram the case wherein a optimising image processing or editing of the current user image data is performed before an output of the user image data into a telecommunications network, to a communication partner. This manner of function will be automatically chosen by the video communication device on the basis of an identification result, for example, of the user and communication partner identification, by means of identification means if the user had determined in advance that the concrete communication partner shall not get transmitted and thus shall not be able to see the current user image data, but the user would like to be seen by this concrete communication partner in front of a special background, wearing certain clothes

and/or with a suitable prepared remaining appearance such as hair style, shave, complexion and smooth face, etc. For example, the latter can then be desired in a receptively suitable manner if the concrete communication partner is for example, a business partner, a superior, an inferior, a sport or leisure friend or an unknown person.

Before the start of a telecommunications connection, for example, a sending, the current user image data obtained by an image input unit 11, for example, a video signal source, in form of, for example, a video signal, are separated and decoded in individual areas or layers 31 to 33 (English: "layers") for the preparation of the editing or optimisation intended by the invention, by a contents recognition block 30. For a better understanding only, the layers 31 to 33 are herein named layer 1 (background), layer 2 (body) and layer 3 (head). These layers correspond to the layers "background" or pregiven background image data 221, "head" or pregiven head image data 222 and "body" or pregiven body image data 223 (compare figure 2) saved in the memory area 22. These terms background, body, head only serve for the illustration of this aspect of the invention. Depending on the size of the provided memory, further areas or layers can be defined for further detailisation. Also for the purpose of the illustration of the method, a further special layer 34 drawn in broken line, for example, for text insertion, is defined, which can be added on if desired.

The described layers 31 to 34 are separated from the video signal current from the image input unit 11 in the form of the video signal source, for example, from the video camera, by means of image processing algorithms within the contents recognition block 30, and are separately administrated in logical memory layers. If an audio visual communication takes place, depending on the user's adjustment, all or individual layers or parts thereof will be replaced by image information or pregiven image data from the memory 22. In the example of figure 4, the layers 31 and 32 referring to the background and reference head are replaced by a reference background image 2 and a head image 3 from the memory areas 221 and 222. The control of the used pregiven image data or image information is ensured by reference markers.

The face shall serve as an example for a further explanation. The recognised reference markers are used for the control of the image information of the layer "head" to be inserted. If the user moves his head, if he, for example, is affirmatively nodding, so the optimised or edited image will perform the same movement. If the layer "body" is activated, the current layer "body" will be replaced by one of the saved body reference images in the form of the given body image data in the area 223. All layers put together form the edited user image data as optimised video image to be sent.

One should consider the fact that the term "layer" does not mean that the image information or user image data processed or edited by the method according to the invention, can only be two dimensional. Instead of this three dimensional image information or user image data can also be processed.

The video image newly assembled is now being technically optimised with regard to chrominance, contrasts, brightness according to preselected or preselectable parameters (see block 42 in the figure 4).

In a further functional unit 43 called cosmetic image optimisation, cosmetic improvements preferably in the facial area are performed. This includes, for example, making the eyes brighter and correcting the eye angle, making the dental area brighter, making shadows brighter (for example, in the case of beards and wide pigmentation changes of the skin) and retouching away minor pigmentation disorders not desired or, for example, warts.

The video signal optimised in such a way is passed to the coding unit 41 and finally sent to the communication partner or the communication partners as receiver(s).

With regard to the figures 5 and 6 communication steps using the method according to the invention are described in the following.

At first, a communication connection is described which is set up externally, i. e., the user is contacted. The audio visual communication device (figure 1) receives a signal from the other side for the set up of a connection. Communication systems corresponding to the prior art possibly transmit a so-called caller identification serving as communication partner or generally communication participant identification. In case of an incoming call (step 51) the caller identification is checked by means of identification means (step 53). This is performed by comparing the transmitted caller identification or communication participant identification to the participant selection data in a participant directory 52 (telephone book with participants' addresses) which is saved in a memory of participant selection data memory means. Certain OIP configurations or editing modi can be assigned or are assigned to the entries of the participant directory 52.

In the presented example it is assumed that either there is no entry with respect to the caller in the participant directory 52 or that the OIP configuration "office" was assigned to the entry. In these cases the signal of the image input unit 11 in the form of the video camera, is forwarded to the contents recognition function block 30; the step 57 calculates the layers 31 to 34 (see

figure 4), which are assembled in real time with the reference information or pregiven image data of the OIP configuration "office" in the step 58. Thereafter the already mentioned cosmetic image optimisation 43 and the technical image optimisation 42 are performed. After the technical image optimisation 42 the optimised video image results in the block 40 according to the preselected parameter values or correspondingly to the editing mode in assignment of the participant entry in the directory 52. The signals, i. e., the optimised images and audio signals are thereafter coded and transmitted depending on the communication protocol in the function block 41.

Now referring to the figure 5 the case is considered that a) the desired participant is known to the participant directory 52 (exit "YES" of the comparison step 53) and that b) the OIP configuration "private" is assigned to the participant (step 55), i. e., no editing of the user image data and thus also no editing mode is performed. Then the unedited video signal, i. e., without OIP is transmitted to the coding unit 41.

Reference is now made to figure 6 which illustrates a set up of a connection originating from the present user. If the present user would like to set up a communication, he will have the possibility of choosing one participant from the participant directory (step 62) or of manually inputting the corresponding participant code (step 61). In the case wherein the desired participant is chosen from the participant directory 62, the checking in the step 64 whether the code ID is known leads to the output "YES". Then, for example, the OIP configuration "leisure" is activated (step 66) according to the OIP parameter in the participant directory 62 corresponding to the preset selection made by the user. Only a cosmetic image optimisation in the function block 43 and the technical image optimisation in the function block 42 are assigned to this editing mode, for example, by the user. The video signal changed hereby is then coded according to the requirements of the communication protocol in the function block 41.

Now an example is being described wherein the user manually inputs the required connection code in step 61 by means of the input device or unit 18 (figure 1). The checking of the manually input participant number or address performed in the inquiry step 64 results in this example in a negative reply in the inquiry 64. Following this, an editing selection control activates for OIP the configuration "office" and the complete image processing, i. e., optimisation or edition of the image information or user image data and, given the case, the audio information or user sound data are performed. The performance of the optimisation of the audio information is not shown in the figures 5 and 6 in favour of the simplification and

clearness, but can be performed in the same way as the image data editing. The edited signal is then forwarded to the coding unit 41.

Apart from this automatic selection between, for example, a complete OIP function, i. e., complete editing, and a "rudimental editing" of the image information or the current user image data only by the cosmetic image optimisation 43 and the technical image optimisation 42, the user has, for example, the possibility at any time to activate or deactivate the OIP configuration or the editing mode during a communication by means of the input unit 18.

The method according to the invention mentioned above can also be used to transmit, for example, other people's faces or completely artificially designed characters. Therein the user can act as "animator". The performance of such "animations" made possible by means of the invention is advantageous especially in commercial use wherein a certain identity, for example, of a person known from commercials as an image holder, is important. Here it is assumed, for example, the desire of a company to establish a certain character as a brand. For reasons of illustration the character "Mr. Kaiser" of an insurance company and as well the character "Mickey Mouse" of the Walt Disney Corporation may be mentioned. A commercial use is herein the provision of a OIP or a corresponding editing mode according to the invention, for telephone agencies. Therein it is desired that each user who would like to use the editing mode has to identify himself for usage of the corresponding editing mode. Thereby, it is ensured that non-authorised people cannot present themselves with a different appearance and possibly cause any damage.

Companies, for example, can instruct telephone agencies equipped with corresponding video communication means to always answer or take customer inquiries and desires using the desired character. In this way customers of the insurance company mentioned above as example, in this manner audio visually communicate with the sympathetic figure of the company established via OIP. Children and young people can be informed about special events and hints for their leisure-time activities by means of sympathetic comic characters, such as for example, Mickey Mouse, from the company. As communication participant identification for the persons giving the desired character life, for example, algorithms for the face recognition can be used so that a misuse of the method mentioned above can be prevented. The face recognition can be part of the control of the layer "head" mentioned above. If the user does not have the same characteristic facial features as the saved head image, the video signal is forwarded in an unedited way to the coding unit for transmission, or a use of the video communication device is prevented.

Furthermore, the above mentioned method for the selection of authorised participants can include voice identification algorithms which are advantageously activated mainly in commercial applications. A current participant says a code phrase which is compared to saved voice samples. Should this result in a match additionally furthermore a correlation with the mentioned image identification can be made on the basis of a saved head image. Thus, a misuse of the invention through mistaking people or pretences of other people is prevented. A communication participant identification of customers is not required in this application of the video communication device according to the invention. If, however, it is desired that also, for example, company internal communication shall take place via corresponding apparatuses, with the communication participant identification with regard to the communication partner, for example, it can be found out if an edited communication connection with a customer or a unedited communication connection with a colleague or superior shall be started. Furthermore, with the above mentioned application it is obvious if the pregiven image data is centrally provided on a suitable hardware so that it is ensured that all authorised users always use the valid data. A processing performance can also be provided centrally in the case of corresponding systems.

Similar to the adjustable call diversion, today already possible with a telecommunications network provider in its system or hardware, the participant identification and/or image data editing can be performed in the system or in the hardware of a telecommunications network provider, namely externally with regard to the video communication device. Thereby, the technical requirements in the video communication device on the user's side can be kept small and nevertheless sufficient processing and memory resources are provided.

Further application of the invention are, for example, in the field of door intercoms with image transmission, interactive video surveillance or similar.

The invention is not restricted to the features and combinations of features of the embodiment example mentioned above and shown in the drawing. The individual aspects, features and combinations of features of the present invention can be implemented and are worth to be protected both individually and in the combination thereof. Besides the general and concrete statements included in the present document for the realisation of the invention all variations, modifications, substitutions and combinations that the ordinary person skilled in the art can easily recognise from the document itself and/or by using his expert knowledge, are also part of the scope of the present document.

Video Communication Device, System and Method

Claims

1. Video communication device having user image data input means for the input of current user image data, image data editing means for the generation of edited user image data out of current user image data, and image data output means for the output of user image data at least to one further communication participant, **characterised in that** there are further provided identification means for identifying at least one communication participant and an editing selection control coupled to the identification means which in dependence on the identification result of the identification means triggers an output of unedited current or edited user image data by means of the image data output means, given the case, preconnecting the image data editing means.

2. Video communication device according to claim 1, **characterised in that** the identification means are designed to identify the user and at least one further contacting or contacted communication participant.

3. Video communication device according to claim 1 or 2, **characterised in that** participant selection data memory means for the saving of participant selection data and participant identification input means for the input of communication participant identifications respectively of the user and/or at least one further contacting or contacted communication participant are assigned to the identification means, and that the identification means are designed to achieve an identification result for the user and/or at least one further contacting or contacted communication participant by comparing saved participant selection data to current communication participant identifications.

4. Video communication device according to claim 3, **characterised in that** the participant selection data memory means include user selection data memory means for the saving of user selection data of at least one possible user, and/or partner selection data memory means for the saving of communication partner selection data of at least one possible communication partner.

5. Video communication device according to claim 3 or 4, **characterised in that** the participant identification input means for the input of current communication participant identifications, especially of user selection data and/or communication partner selection data, include manual selection means, electric signal input means, optical signal input

means and/or acoustic signal input means wherein preferably, given the case,

- the manual selection means include a key board, menu control keys, menu control levers or menu control pointing instruments and/or touch-sensitive input means for the input of communication participant identifications by the user, and/or
- the electrical signal input means are designed for the reception of electrical signals for the input of communication participant identifications by the user or by a communication participant, and/or
- the optical signal input means are designed for the reception of optical signals for the input of communication participant identifications by the user or by a communication participant, and/or
- the acoustic signal input means are designed for the reception of acoustic signals for the input of communication participant identifications by the user or by a communication participant.

6. Video communication device according to one of the preceding claims, **characterised in that** the editing selection control is designed to prevent or to initiate in accordance with a pregiven or presetable editing mode or one out of a plurality of pregiven or presetable editing modi, an editing of the current user image data by means of image data editing means, in dependence on the identification result of the identification means.

7. Video communication device according to one of the preceding claims, **characterised in that** pregiven image data memory means are provided for the saving of pregiven image data, and that the image data editing means are designed for the editing of current user image data by means of and/or on the basis of pregiven image data to create edited user image data.

8. Video communication device according to claim 7, **characterised in that** the pregiven image data memory means include pregiven background image data memory means and/or pregiven people image data memory means, and that the image data editing means are designed for the separation of the current user image data at least in background image data and people image data, and for the replacement of the background image data and/or people image data completely or partly with corresponding pregiven background image data or pregiven people image data, or for the creation of edited background image data and/or people image data on the basis of corresponding pregiven background image data or pregiven people image data from the corresponding memory means.

9. Video communication device according to claim 8, **characterised in that** the pregiven image data memory means or the pregiven people image data memory means include body image data memory means and/or head image data memory means, and that the image data editing means are designed for the separation of the people image data into body image data and head image data and the replacement of body image data and/or head image data completely or partly with corresponding pregiven body image data or pregiven head image data, or for the creation of edited body image data and/or head image data on the basis of corresponding pregiven body image data or pregiven head image data from the respective memory means.

10. Video communication device according to one of the claims 7 to 9, **characterised in that** in the pregiven image data memory means, pregiven background image data memory means and/or pregiven people image data memory means or, given the case, body image data memory means and/or head image data memory means, a plurality of pregiven background image data and/or pregiven people image data or, given the case, pregiven body image data and/or pregiven head image data or a plurality of corresponding sets or subsets or components thereof can be saved or are saved which can be assigned to different editing modi of the image data editing means.

11. Video communication device according to one of the claims 7 to 10, **characterised in that** the image data editing means are designed to edit the separated current image date separately from each other and at least essentially simultaneously, and to put them together again afterwards for the generation of edited user image data.

12. Video communication device according to one of the preceding claims, **characterised in that** by means of image data editing means a cosmetic and/or technical image optimisation of user image data in dependence on an identification result or independent of an identification result and/or, given the case, before and/or after a replacement of background image data and/or people image data or, given the case, body image data and/or head image data can be entirely or partly performed by corresponding pregiven image data from the respective pregiven image data memory means on the basis of editing algorithms.

13. Video communication device according to one of the preceding claims, **characterised in that** the user image data input means generate chronologically successively a

plurality of current user images each of which are edited individually one after the other and/or according to presetable rules by means of image data editing means.

14. Video communication device according to one of the preceding claims, **characterised in that** the image data editing means are designed to successively dynamically perform the separation of background image data and/or people image data as well as, given the case, body image data and head image data and, given the case, their replacement by means of corresponding pregiven image data from the respective pregiven image data memory means for single user images.

15. Video communication device according to one of the preceding claims, **characterised in that** the user image data input means include at least one camera, and that the image data output means include at least one interface to a telecommunications network.

16. Video communication device according to one of the preceding claims, **characterised in that** user sound data input means for the input of current user sound data, sound data editing means for the creation of edited user sound data from the current user sound data, and sound data output means for the output of user sound data to at least one further communication partner are provided.

17. Video communication device according to claim 16, **characterised in that** the editing selection control is designed to generate an output of unedited current or edited user sound data by means of the sound data output means, in dependence on the identification result of the identification means.

18. Video communication device according to claim 16 or 17, **characterised in that** pregiven sound data memory means for the saving of pregiven sound data are provided, and the sound data editing means are designed for editing the current user sound data by means and/or on the basis of pregiven sound data to create edited user sound data.

19. Video communication device according to one of the claims 16 to 18, **characterised in that** by means of sound data editing means a cosmetic and/or technical sound optimisation of user sound data in dependence on a identification result or independently of a identification result and/or, given the case, before and/or after an editing of the current user sound data by means of the pregiven sound data from the pregiven sound data memory means can be performed on the basis of editing algorithms.

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20. Video communication device according to one of the claims 16 to 19, **characterised in that** editing modi of the sound data editing means pregiven by the user, individually or groupwise are assigned to identification results of the identification means.

21. Video communication device according to one of the claims 16 to 20, **characterised in that** the user sound data input means include at least one microphone, and that the sound data output means include at least one interface to a telecommunications network.

22. Video communication device according to one of the preceding claims, **characterised in that** the identification means include at least one interface to a telecommunications network.

23. Video communication system, **characterised in that** at least one video communication device according to one of the claims 1 to 22 is included and connected or can be connected to a telecommunications network.

24. Video communication method, wherein
at least one communication participant is identified by means of identification means,
current user image data are input into user image data input means,
an editing selection control leads or does not lead current user image data in dependence on the identification result of the identification means, to the image data editing means, the image data editing means, on receiving the current user image data, generate thereof or therefor edited user image data, and
finally unedited current or, if existing, edited user image data are outputted by means of image data output means.

25. Video communication method according to claim 24, **characterised in that** a video communication device according to the claims 2 to 22 is used and/or operated.

26. Video communication method according to claim 24 or 25, **characterised in that** image data or image and sound data especially in the case of image telephoning are transmitted in an presentation optimised way wherein image data or, given the case, sound data deriving from a video source and, given the case, an audio source, respectively, are changed before their transmission to a communication partner on the basis of pregiven image data or, given the case, pregiven sound data, respectively, corresponding to at least one predetermined or predetermineable criteria, by the following steps:

before starting a communication

a) pregiven image data are created and saved, and

b) parameters referring to the image data are defined, saved and assigned to the pregiven image data saved in step a), and

during a communication

c) user image data, deriving from user image data input means, especially a video source, with regard to one or several chosen or choseable image data parameter(s) are extracted by means of parameters defined and saved in step b),

d) the user image data of step c) based on the chosen image data parameter(s) are edited on the basis of the assigned pregiven image data, and

e) the user image data edited in step d) are transmitted to one or several communication partners.

27. Video communication method according to claim 26, **characterised in that** the steps d) and e) are performed at a central location which is remote from the user, wherein the user image data, the assigned pregiven image data and the image data parameter(s) are transmitted from the user's location to the central location.

28. Video communication method according to claim 26 or 27, **characterised in that** the steps a) to e) are performed at a user's location.

29. Video communication method according to one of claims 26 to 28, **characterised in that** an additional step f) is provided in which voice samples of authorised users, saved beforehand are compared to a spoken code phrase of a current user, and in a positive result of the comparison a release of an edited communication for this user is performed.

30. Video communication method according to claim 29, **characterised in that** in step f) the saved voice sample is additionally assigned to pregiven image data which belong to a user or are chosen as belonging to him, and the user is identified on the basis of the saved voice sample and the relating pregiven image data.

31. Video communication method according to claim 29 or 30, **characterised in that** a voice analysis of the spoken code phrase and an image analysis of the user image data deriving from the user image data input means, especially the video source, are performed in step f).

32. Video communication method according to claim 31, **characterised in that** in the image analysis characteristic facial features of a user are compared to relating or chosen pregiven image data.

33. Video communication method according to one of the claims 30 to 32, **characterised in that** before the performance of step c) the user is identified as authorised to use saved pregiven image data for the audio visual communication.

34. Video communication method according to one of the claims 24 to 33, **characterised in that** the user image data to be processed or to be edited and analysed, the pregiven image data as well as the edited user image data include motion images, two dimensional and three dimensional image information.

35. Video communication method according to one of the claims 24 to 34, **characterised in that** the user image data to be transmitted are shown to the user before the transmission.

36. Video communication method according to claim 35, **characterised in that** the display includes an interactive user surface which also displays the choseable and/or chosen pregiven image data as well as the choseable or chosen image data parameters.

37. Video communication device for the presentation optimised transmission of video and/or audio data according to the claims 1 to 22 as well as in particular for the performance of the video communication method according to one of the claims 24 to 26, **characterised in that** the device includes:
- video input and output means (11, 12),
- audio input and output means (13),
- sending and receiving means (14,15),
- an interface (16) to at least one transmission channel,
- an input device (18) for the input of control and command signals,
- memory means (20) for the saving of user and system programmes as well as of pregiven image data and pregiven sound data, wherein

the above mentioned means, equipment and components are in functional connection with a processor unit (10) which is designed to perform the method steps in interaction with the means and components mentioned.

38. Video communication device according to claim 37, **characterised in that** it furthermore has an interface (17) being in connection with the processor unit (10) for

the connection with a superior administration unit and/or a superior memory medium, for example, with a "personal computer".

39. The use of the video communication device according to one of the claims 1 to 22, the video communication system according to claim 23 and the video communication method according to one of the claims 24 to 36 for the especially image optimised transmission of video and/or audio data in image telephoning, video conferences or computer networks.

Video Communication Device, System and Method

Abstract

The invention relates to a video communication device having user image data input means for the input of current user image data, image data editing means for the generation of edited user image data out of current user image data, and image data output means for the output of user image data at least to one further communication participant, wherein there are provided identification means for identifying at least one communication participant and an editing selection control coupled to the identification means which in dependence on the identification result of the identification means triggers an output of unedited current or edited user image data by means of the image data output means, given the case, preconnecting the image data editing means.

Moreover, the invention relates to a video communication system having at least one such video communication device.

Furthermore the invention relates to a video communication method wherein
at least one communication participant is identified by means of identification means,
current user image data are input into user image data input means,
an editing selection control leads or does not lead current user image data in dependence on the identification result of the identification means, to the image data editing means,
the image data editing means, on receiving the current user image data, generate thereof or therefor edited user image data, and
finally unedited current or, if existing, edited user image data are outputted by means of image data output means.

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FIG. 1

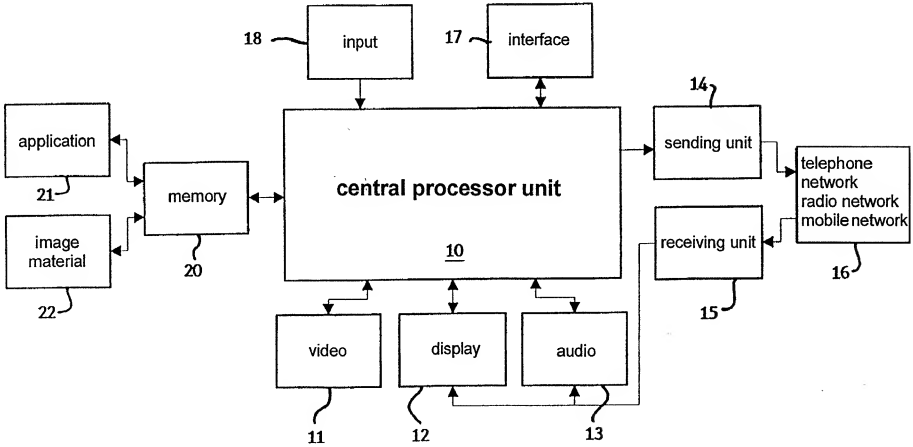

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FIG. 2

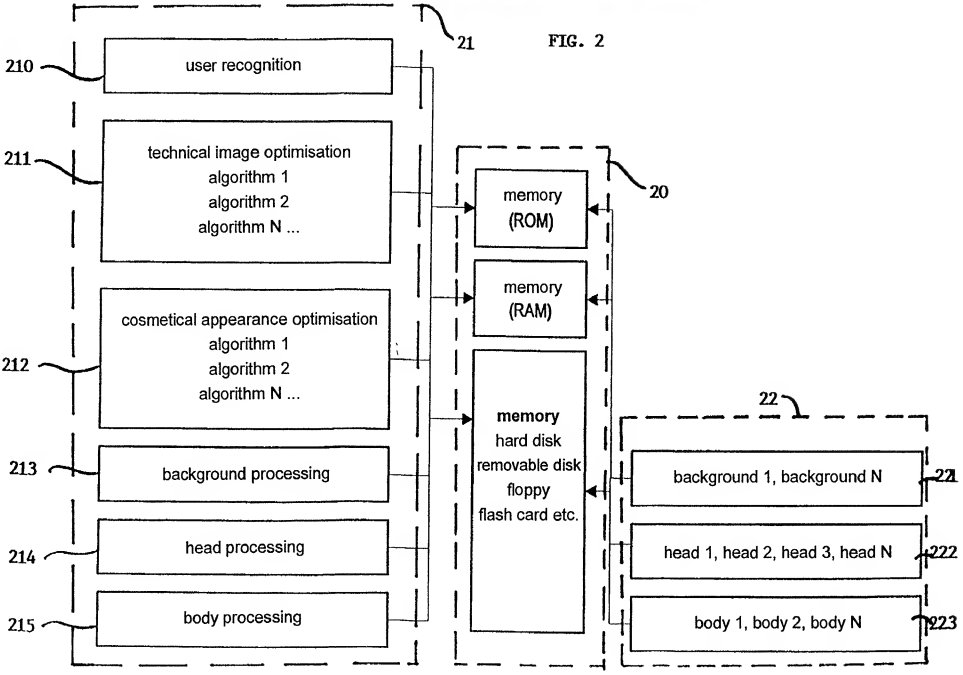

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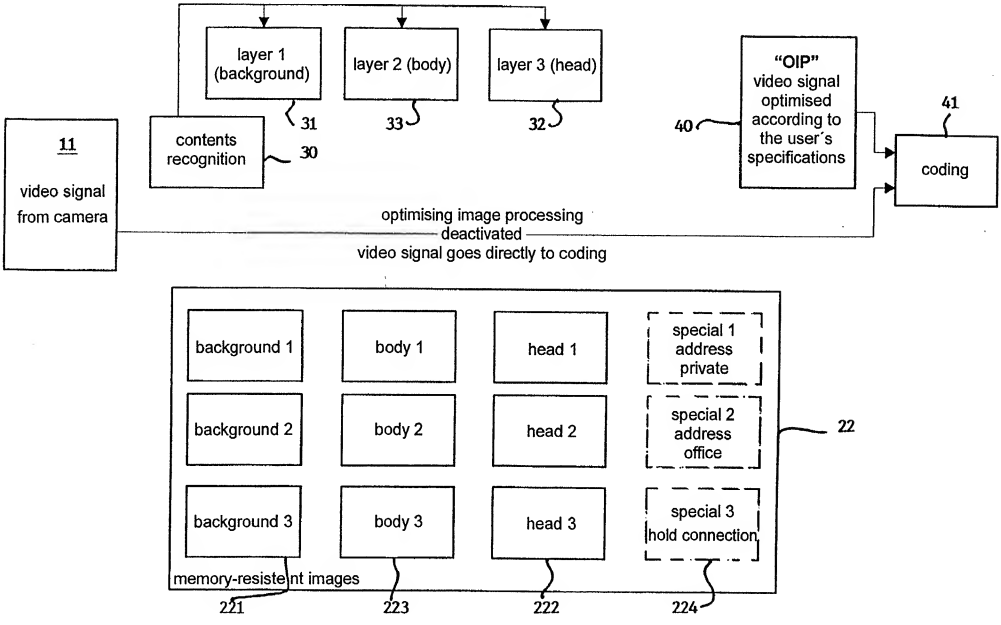
FIG. 3



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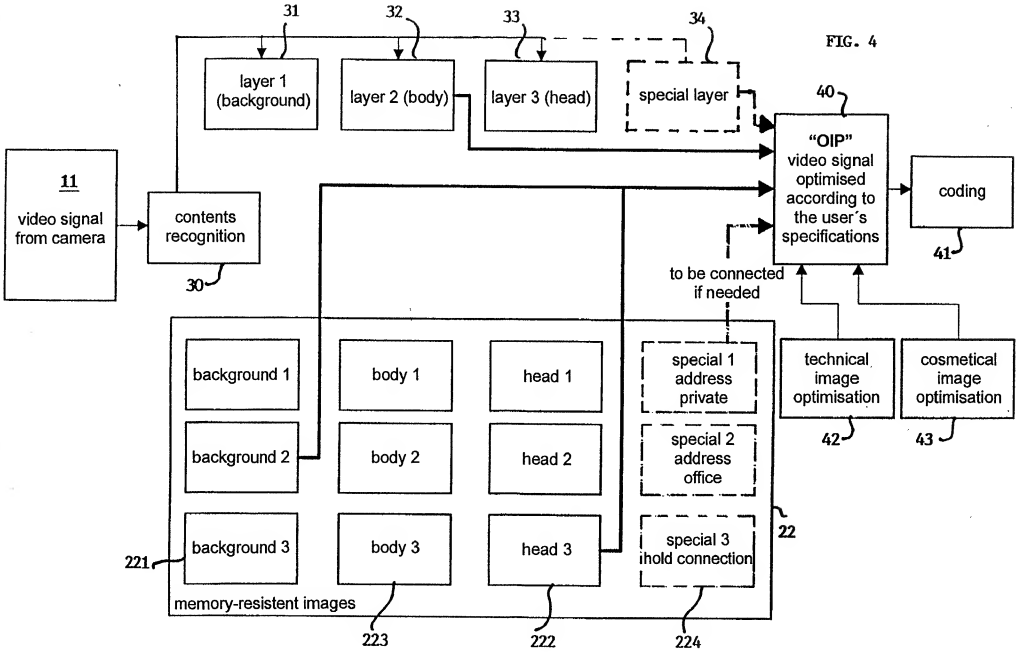

FIG. 4

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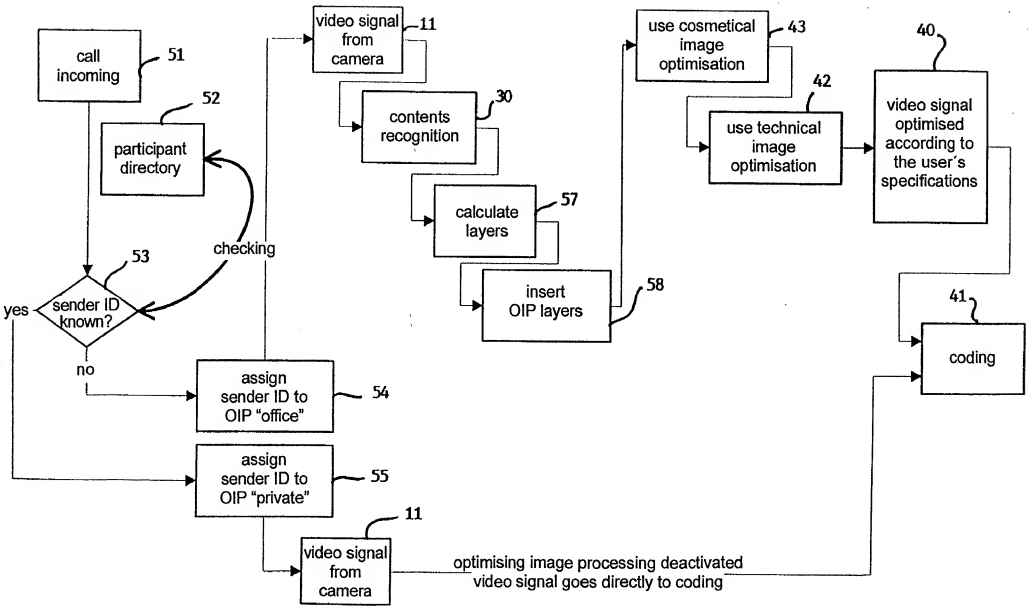

FIG. 5

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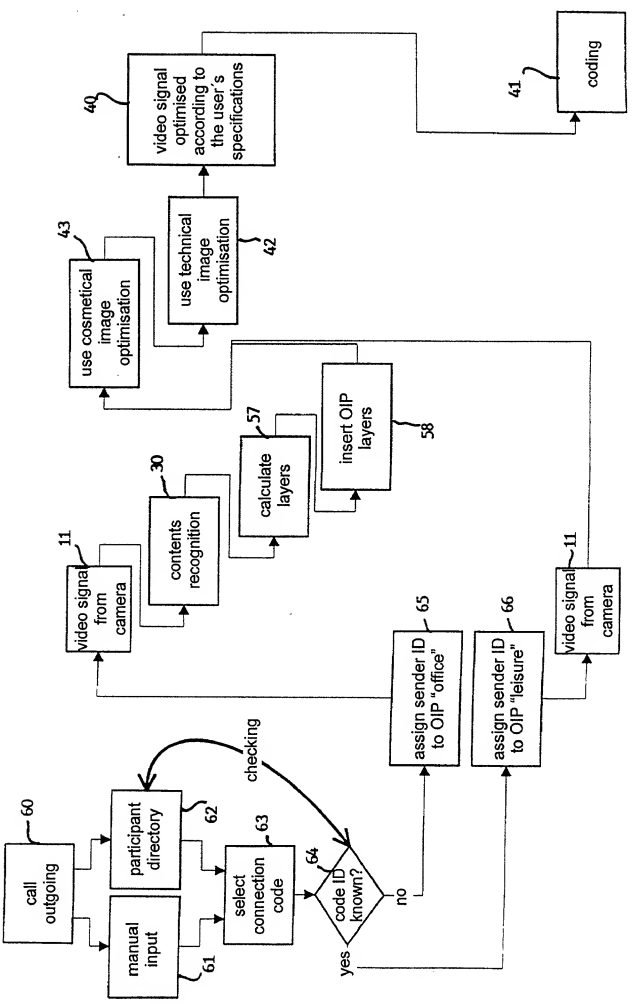
FIG.6



DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed and for which a patent is sought on the invention entitled

VIDEO COMMUNICATION DEVICE, SYSTEM AND METHOD

the specification of which:

__X__ was filed
under Attorney's Docket Number 770-X01-004
as U.S. Patent Application No. 09/913,615 with the USPTO on August 15, 2001.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information material to the patentability of this application in accordance with 37 CFR 1.56.

I hereby claim the benefit of foreign priority under 35 USC 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application the priority of which is claimed:

Prior Foreign Application(s): Number	Country	Filing Date	Priority Claimed Yes	No
199 06 472.5	Germany	February 16, 1999	XXX	
199 48 546.1	Germany	October 8, 1999	XXX	

I hereby claim the benefit of United States priority under 35 USC 120 of any United States application(s) or 365(c) of any PCT international applications designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is disclosed in a listed one of the prior United States or PCT international application in the manner provided by the first paragraph of 35 USC 112, I acknowledge the duty to disclose information material to the patentability of this

application as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

U.S. Parent Application or PCT Parent Number	(Filing Date)	Parent Patent Number
PCT/DE00/00442	February 16, 2000	

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF INVENTOR: Tobias DORFNER

INVENTOR'S SIGNATURE: T. Dorfner DATE: 18 APRIL 2002

RESIDENCE: München, Germany DE

CITIZENSHIP: German

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